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3

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## **The Expansion of Higher Education and Uneven Access to Opportunities for Participation in It, 1978–2003**

Opportunities for higher education in China have grown continually since the reestablishment of the college entrance examination system in 1978, with a percentage of overall enrollment that soared from 1.56 percent in 1978 to 15 percent in 2002, showing that China had already entered the era of mass higher education. However, does the expansion of higher education and an overall increase in opportunities actually mean a greater degree of fairness in higher education?

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36

## Research Topic and Hypothesis

As the discussion of the relation between the expansion of higher education and inequality in education goes on unabated, we are concerned with the following question: During this time of major social reform, just which social strata are getting greater benefits from the expansion in opportunities for higher education, and in what form are they getting these benefits? The re-establishment and development of higher education after 1978 was closely linked to a series of moves toward social transformation in various forms such as the process of modernization, transition to a market economy, and reform of the social system, which drove change in the resources and opportunities available within the field of education, profoundly affecting how these resources and opportunities were allocated. In the midst of such far-reaching and profound social changes, how might the mechanism of social stratification change with regard to the opportunities for education originally present, particularly the opportunities for higher education? Most studies of disparity in opportunities for higher education in China today focus on issues such as unbalanced development among different regions and disparities between city and country or male and female, with studies of differences in social stratum being comparatively few, and even though some articles have discussed this issue, their discussions are not supported by reliable data.

In this article I attempt to present a concrete hypothesis concerning how such factors as social stratum based strategic behavior affect the allocation of opportunities for higher education.

Referring to the categorization of education by such authorities as Max Weber (1997), Antonio Gramsci (2000), and Randall Collins (1979), we can agree that, in relation to the overall system of status in society, education may first be divided into two basic types: status-oriented education and survival-oriented education. The former is mostly oriented toward achieving higher social status, whereas the latter usually involves acquiring some sort of professional or vocational skill (which, as such, may primarily be a survival skill) as its goal. The basic difference in function between these two disparate types of education is easy to see. For example,

being qualified for admission to a traditional baccalaureate [*benke*] college program means a comparatively high-status line of work and a career with good prospects, and when compared to higher adult education, the traditional baccalaureate program brings expectations of higher economic returns and the rewards of higher status. The same logic that is applicable to categorizing the differences in higher education is also applicable to the various branches of secondary education. Consequently, Hypothesis 1 addresses distinctions in the nature or type of education: The stronger the status orientation of the education received at the secondary level (especially in key-institution [*zhongdian*] senior high schools), the stronger a role it plays in obtaining further education (a traditional baccalaureate college degree), which has clearer relevance toward and greater efficacy in gaining status, and the stability of this driving force will not change even as formerly limited opportunities expand. Additionally, as opportunities for higher education in the survival-orientated category increase, secondary professional/vocational education will find its position strengthened because it provides access for opportunities to higher education in that same survival-oriented category.

Taking it a step further, we can make a connection between differences in type of education and class-based strategic behavior. The distinction between the two types of higher education will cause people, whether they are members of the privileged class needing to maintain their status or members of a less privileged class striving for upward mobility, to develop a stronger preference for formal higher education that has higher efficacy and a clearer orientation regarding the acquisition or preservation of status. The principle of rational choice would indicate that social resources available to people of different strata will always be applied first to competition for those higher education opportunities that promise to be most efficacious. Nonetheless, because social resources and opportunities are limited for people within a particular stratum, when the opportunities for higher education undergo limited expansion, the opportunities with clearer and surer effects on status will tend to go to members of the stratum with superior resources. This will occur when the opportunities for access to

higher education with a clear status orientation (especially traditional baccalaureate programs) expand and the members of the privileged strata can use the superior resources already at their disposal to compete for the newly created opportunities, gaining a proportion of these new opportunities at least equivalent to the share they originally had, and, consequently, multiplying the opportunities available for their children to receive this type of education (Hypothesis 2).

On the other hand, parents with less status in terms of education and profession have comparatively fewer social resources in areas such as economics and culture, which makes them unable to resist the influence of the more privileged group as they compete for more prestigious opportunities in higher education and obliges them to withdraw and pursue the next best opportunity, one with comparatively less prestige. Given these circumstances, the frequency with which children of the privileged group appear in less prestigious contexts within higher education—particularly adult education—may well decline, which means that as the privileged stratum consolidates and strengthens its competitive position vis à vis status-oriented higher education, the advantage they have with respect to opportunities for survival-oriented higher education will involute to some degree (Hypothesis 3).

With opportunities for higher education in China today directly allocated through a rigorous examination system (even adult higher education established a “self-study examination system” [*zixue kaoshi zhidu*] early on), the correlation between a family’s cultural capital and the ability to obtain such an opportunity becomes even more direct. Because of this, the social stratum that is placed in lower-level work despite having a good educational background will, because of an internal drive toward upward mobility, focus this sort of cultural capital (and, of course, this may also include use of other socioeconomic resources) ever more intensely on obtaining every sort of competitive advantage in winning opportunities for higher education, and, consequently, we can see the possibility of a shift toward elitism in the field of higher education (Hypothesis 4).

Based on the previous discussion and the relation between “so-

cial stratum and the distribution of resources,” which is very commonly pointed out in studies of social stratification, we can make an even bolder hypothesis that the social status the individual has already attained will become more able to have a direct effect on his or her ability to obtain opportunities for higher education, and this ability will change in a way that is commensurate with the differences between the different types of higher education (Hypothesis 5).

## **Data, Variables, and Models**

### *Data and Analysis*

Data for this study come from a general social survey of China carried out in 2003. This survey used data from the fifth census as a sampling frame, with sampling carried out using a staged probability proportionate to size [PPS] design, including 5,960 sample points covering cities and towns in twenty-eight provinces, municipalities, and autonomous regions.<sup>1</sup> The questionnaire interview was administered to town and city dwellers eighteen to sixty-nine years of age, and this yielded 5,894 valid samples. The questionnaire responses recorded in detail the subject's individual educational background, work history, and other relevant data. Of total samples taken, 1,173 reported having received higher education, with adult higher education, junior college, and traditional baccalaureate and above accounting for 9 percent, 5.5 percent, and 5.4 percent, respectively, of the sample. Compared with a sample of 0.95 percent taken from the fifth census data as the basis for estimating the proportion of city and town dwellers between the ages of eighteen and sixty-nine who had received higher education (adult higher, junior college, and baccalaureate and above accounted for 4.53 percent, 4.72 percent, and 3.98 percent, respectively), the survey sample gave somewhat higher results, particularly in the area of adult higher education. Our samples, however, recorded only having enrolled in adult higher education, unlike the census, which recorded “academic credentials” [*xueli*]. Furthermore, after the census was taken, higher education in China underwent

rapid development, so at the time the survey was administered there had been a rather large increase in the number of people having received higher education. With all this taken into account, the survey study gives a reliable representation of the population at large.

This study principally utilized the event history analysis technique. Higher education was divided into three different levels: adult higher education, junior college, and ordinary baccalaureate. The analytical approach we utilized for this multilevel sample data was to treat events on each level separately, which meant we started with four principal models:

Model 1 (M1): The model for higher education opportunities in general, with the event being “the first time any kind of opportunity for higher education was obtained.”

(Sub-)Model 2 (M2): The model for opportunities for adult higher education, with the event being “obtaining an opportunity for adult higher education.”

(Sub-)Model 3 (M3): The model for opportunities for junior college, with the event being “obtaining an opportunity for junior college.”

(Sub-)Model 4 (M4): The model for opportunities for baccalaureate study, with the event being “obtaining an opportunity for baccalaureate study.”

Based on the definitions for the event in each model, we established a separate and independent risk set showing number of people and years for each model. The scope of observation for each of the data sets was the years 1978–2003. The time when the respondent became seventeen was set as the initial year of risk, though for those who were older than seventeen in 1978, observation began in 1978. Samples within the data set that had not undergone any of the events specified in the models were observed from the initial year of risk until they were forty-five years old, though for those who were not yet forty-five years old by 2003, observation ended in 2003. Observation of samples that underwent one of the events specified in the model ended as soon as the event in question had occurred and an entry to that effect had been made in the data record. Participants that had received higher education prior to 1978 were excluded from the risk data set.

At the same time, because of the impact of employment and work history on higher education, we established an additional baccalaureate-study model (Model 5 [M5]) using a post-1978 “college-age population,” consisting of samples who entered the risk period for university baccalaureate study beginning in 1978 (specifically those who were born between 1961 and 1985), with the initial year of risk occurring when they were seventeen and the final year of risk occurring when they were twenty-five, with the event to be observed as “obtaining undergraduate education.” This model excluded the effects of work experience from consideration and also excluded those who had been affected by the abnormalities of the Cultural Revolution years. This model allowed us to undertake comparatively “pure” observation of the mechanism for distributing opportunities for baccalaureate study to the college-age group and the changes this mechanism underwent before and after the expansion of opportunities.

Viewed in terms of the event-analysis approach, the events listed above are all simple, nonoverlapping events for which we can use the normal Cox proportional hazard model to estimate the effects of each independent variable. Because the period for observation of the various samples in the risk set was comparatively long, all observations consisted only of recording before-employment or after-employment status, and yet there was a marked difference between the baseline hazard functions before and after employment.<sup>2</sup> Postemployment opportunities obtained for vocational or traditional higher education showed a significant decrease over pre-employment opportunities, whereas opportunities for adult higher education showed a marked increase. Consequently, when estimations were made for each event, stratification according to “whether or not subject has become employed” was factored in (except for M5, an unstratified ordinary proportional hazard model was used for calculations):

$$h_i(t) = h_{0j}(t) \exp(b'x)$$

where  $h_i(t)$  is the probability that the event will occur for individual  $i$  at time  $t$ ;  $h_{0j}(t)$  is the baseline risk function for two groups—



those with ( $j = 1$ ) and without ( $j = 0$ ) employment; and  $x$  and  $b'$  are, respectively, the independent variable matrix and the parameter matrix.

### **Variables**

#### *Social Stratum Variables*

*Fathers' occupation–education strata.* The variable denoting social-stratum background is a key part of this research design. This study combined the father's occupational status and his cultural capital into one variable that measured the combined effect of class and educational origin on children's opportunities for higher education. Here the social stratum to which the father belonged was determined according to the basic relation between his occupational class and his level of education. This was operationalized as follows: The father's educational level was divided into three levels, higher education, secondary education (junior and senior high school), and basic education (primary school or less). For categorization of the father's occupation, we used Erikson and Goldthorpe's (1992) eleven-level categorization of jobs as a basis, dividing four new levels—high-level, mid-level, and lower-level white collar and physical laborer—to the model. Next the father's occupational class and educational level were combined appropriately into pairs, and this produced the eight job–education categories displayed in Table 1. Category 5 (E5) includes those with higher or secondary education that belong to lower-level white collar, Category 6 (E6) includes all those who have primary education or less and do any sort of white-collar work, and Category 7 (E7) consists of all those who do physical labor and have secondary education or above. Category 8 (E8), which includes those with basic education who are doing physical labor, serves as a reference group for this variable. Table 1 gives the distribution of higher education opportunities for all job–education levels for all three periods.

*Individual employment situation and social status.* In this study

Table 1  
**Sample Distribution for Higher Education Opportunities According to Father's Job-Education Status Over Each Period**

| Period <sup>a</sup> | Job-education stratum                  | 1998–2003 |    |    |      |     |     | 1978–97 |      |    |    |    |      | Before 1978 |    |    |      |       |       |   |      |
|---------------------|----------------------------------------|-----------|----|----|------|-----|-----|---------|------|----|----|----|------|-------------|----|----|------|-------|-------|---|------|
|                     |                                        | A         | J  | B  | Sub. | A   | J   | B       | Sub. | A  | J  | B  | Sub. | A           | J  | B  | Sub. | A     | J     | B | Sub. |
| E1                  | High white-collar/higher ed.           | 4         | 2  | 6  | 12   | 13  | 21  | 17      | 51x  | 1  | 2  | 4  | 7    | 1           | 2  | 4  | 7    | 69    | 113   |   |      |
| E2                  | High white-collar/secondary ed.        | 6         | 1  | 3  | 9    | 26  | 10  | 8       | 44   | 3  | 1  | 3  | 7    | 3           | 1  | 3  | 7    | 60    | 166   |   |      |
| E3                  | Mid-level white-collar/higher ed.      | 7         | 5  | 13 | 25   | 27  | 11  | 20      | 58   | 3  | 3  | 4  | 10   | 3           | 3  | 4  | 10   | 93    | 176   |   |      |
| E4                  | Mid-level white-collar/secondary ed.   | 24        | 16 | 10 | 50   | 46  | 28  | 27      | 101  | —  | 1  | 5  | 6    | —           | 1  | 5  | 6    | 157   | 459   |   |      |
| E5                  | Lower white-collar/secondary or above  | 9         | 5  | 12 | 26   | 13  | 16  | 6       | 35   | 3  | 1  | 5  | 9    | 3           | 1  | 5  | 9    | 80    | 235   |   |      |
| E6                  | All basic ed./white-collar             | 10        | 4  | 2  | 26   | 49  | 20  | 8       | 77   | 5  | 9  | 18 | 32   | 5           | 9  | 18 | 32   | 128   | 743   |   |      |
| E7                  | Secondary ed. and above/physical labor | 43        | 32 | 28 | 103  | 59  | 38  | 26      | 123  | 3  | 2  | 4  | 9    | 3           | 2  | 4  | 9    | 225   | 811   |   |      |
| E8                  | Basic ed./physical labor               | 40        | 4  | 2  | 46   | 92  | 51  | 29      | 172  | 10 | 21 | 37 | 68   | 10          | 21 | 37 | 68   | 280   | 2,613 |   |      |
| E9                  | Unavailable or did not fit categories  | 6         | 3  | 3  | 13   | 22  | 9   | 10      | 41   | 2  | 9  | 9  | 20   | 2           | 9  | 9  | 20   | 77    | 578   |   |      |
|                     | Total                                  | 149       | 72 | 77 | 298  | 347 | 204 | 152     | 703  | 30 | 49 | 89 | 168  | 30          | 49 | 89 | 168  | 1,170 | 5,894 |   |      |

Note: A = adult higher education; J = junior college; B = baccalaureate education; Th = total younger generation receiving higher education; T = total samples for each category.

<sup>a</sup>When opportunity for higher education was obtained.

we entered the variable, “whether he/she has found employment” into the model as a stratification control variable during the year before the risk period. It is a dummy variable, with zero representing “not yet employed” and 1 representing “already employed.”

The job status of the individual in question is also a time-varying variable that describes the activities of the respondent during the year before the risk period: The first differentiation deals with whether the respondent was enrolled as a student during the year before the risk period. If so, then the respondent was placed in a single category, but if not, then the respondent’s job status during the year prior to the risk period was placed into one of four categories—high-level white collar, mid-level white collar, lower-level white collar, or physical laborer (includes jobless, unemployed, and laid off)—based on the revised Erikson–Goldthorpe model described previously. The last category, physical laborer, was used as a reference group.

#### *Categories of Senior High School Level Institutions*

The branching off of education at the senior high school level corresponds to the survival–status differentiation. The distinction between vocational/preprofessional high schools, ordinary high schools, and key-institution [*zhongdian*] high schools was used to assess the impact of type of senior high school education on the distribution of opportunities for different types of higher education. Those who had not received senior high level education were treated as a reference category for each of the models.

#### *Categorization by Gender, Cohort, and Place of Residence*

*Gender.* This was a dummy variable, with female as a reference group.

*Cohort.* This variable was included to address those whose birth would place them at the right age for higher education during the Cultural Revolution period. This was a dummy variable, set at 1 for those born during the period 1949–60 (i.e., those who were

caught up in the Cultural Revolution) and at zero for those not born during this period.

*Place of residence.* This variable, which could change during the risk period, described the individual's place of residence during the year before the risk period (if the individual was enrolled in school, the school was considered the place of residence). If a move from one category of city to another occurred, then the place of residence was adjudicated based on the time of the move. What this variable actually focused on is the qualitative difference between levels of cities or local areas where opportunities for higher education were made available, with these differences operationalized into six levels: directly administered municipalities, provincial capitals, regional cities, county seats, towns, and rural villages.

#### *Party Membership*

Party membership of the individual in question was a time-varying dummy variable, with party membership during the year before the risk period set at 1 and status as nonmember treated as the reference group. Having a father who was a party member was a non-time-varying variable, and, as in the previous case, nonmember status was relegated to the reference category.

#### *Division into Time Periods, Interaction Effects, and Model Testing*

Even though the Ministry of Education did not promulgate expansion of opportunities until 1999, we took all the minor changes that took place before and after the Ministry's pronouncement into consideration and placed the watershed between the two periods at 1998, giving us 1998–2003 as the period of expansion and 1978–97 as the reference period.

Because of the need for model testing, as part of our process of analysis we allowed for time-period interaction effects for each of the variables mentioned previously. To facilitate our presentation of model testing, we labeled the models that included only main effects as “main effects models” [*zhu xiaoying moxing*], and we

referred to the models that included both main effects and period-related interaction effects as “full models” [*quan moxing*]. Our basic approach to model testing was to take each full model, with the condition that all main effects were included in it, and carry out a stepwise regression for each interaction effect, designating the model we obtained after stepwise regression as the “presentation model” for this study. Standard errors of model parameters were the outcome of robust reestimation, clustered by person ID.

Model testing revealed clear differences between the presentation models and the main-effects models, whereas comparison with the full model showed that the deviation of the adjusted data was not statistically significant. This makes it clear that time periods and time-period interaction effects were significant in all the presentation models and that the presentation models basically included the time-period interaction effects that may possibly exist.

## Discoveries and Explanation

### *The General Situation with Regard to the Distribution of Opportunities for Higher Education: 1978–2003*

An analysis of models M1 to M5 shows that during the period 1978–2003, each of the factors we studied had an effect that differed from the others on opportunities for the various forms of higher education, and, moreover, the change in each of the factors during the period of expansion took place in a different form.

Looking at it in terms of opportunities for higher education in general (M1), most of the factors we studied had a significant effect, which shows that during the period 1978–2003 the distribution of opportunities for higher education was subject to inequality because of gender and disparity according to level of city, class background, and type of senior high education the individual in question had received. At the same time, those who had already found employment during the risk period were very clearly affected by the status of the job they had obtained. Viewed in terms of the effects of expansion, M1 also shows that, compared with the period 1978–97, opportunities for higher education in China

in 1998 and after increased by 2.3 times (after controlling for the effects of other variables), whereas the effects of other factors on the overall availability of opportunities for higher education increased in some cases and showed a clear trend toward decline in others: Individual party membership showed a certain level of increase in its effect with an 0.1 level of significance. After the individual became employed, having a mid- or high-level managerial position gave him or her an advantage of 1.85 times the chance of getting higher education over someone with a physical labor job. At the same time, we can see that the disparity between genders declined by about 27 percent. With respect to differences in social status, compared to those whose fathers were laborers with low levels of formal education, all other job-education strata saw the advantages they had enjoyed clearly declining (white-collar workers with lower levels of education had no statistically significant results, though they were also declining), with levels of decline between 35 percent and 64 percent.

The submodels that treat distribution of opportunities separately according to type of higher education show that the difference between genders was most pronounced in baccalaureate education, whereas the difference between genders in adult higher education and junior college was not significant. Models M4 and M5 show that before expansion of opportunities, male students' chances for baccalaureate education were around 70 percent better than those available for females, whereas after expansion the males' advantage shrank to around 50 percent.

In addition, individuals living in cities with different rankings did not enjoy exactly the same level of advantage when it came to the chance for higher education. Compared to those living in municipalities reporting directly to the central government, those living in cities with lower ranking may not have been at any serious disadvantage when it came to getting adult or vocational higher education, but when it came to baccalaureate education, there was a significant disparity. Illustrating this with M5: During the year prior to the risk period, young people seventeen to twenty-five years old who were living in provincial capitals, regional cities, county seats, and ordinary towns received 30 percent to 40 per-

cent fewer opportunities for higher education than young people also of college age who were living in municipalities reporting directly to the central government. This disparity between cities of different ranks did not, however, change significantly after expansion began (interaction effects between the place-of-residence variable and the time period were very weak).

In the submodels, a certain advantage based on the political-status variables for the subject's father and the subject him or herself only showed up in the submodel that dealt with adult higher education. If the father was a party member, the child's chances of getting adult higher education were 27 percent better, and the child's political status had more or less the same effect, but this was only noteworthy at the 0.1 level of significance. During the period 1998–2003 there was no significant change in the effect of political status. To address the issue that is still frequently of concern to educators—the effect of the Cultural Revolution on distribution of opportunities for higher education—we set up a special category according to year of birth (those born between 1949 and 1960) to represent those who had been affected by this historical event. The results of running the model revealed that the Cultural Revolution generation enjoyed a clear superiority when it came to chances for proper baccalaureate education (approximately twice the probability of those born in other periods), though they showed no marked difference when it came to chances for adult or junior college. This makes it clear that, although members of this generation lost their chance for higher education during the Cultural Revolution, once the college entrance examination was reinstated, supplemental and compensatory factors increased the opportunities available to them, which to a certain extent shows that a relatively brief historical catastrophe cannot prevent the ultimate emergence of truly elite talent.

The branching off of senior high level education into different types, particularly in the way the key-institution [*zhongdian*] schools affect the distribution of opportunities for higher education, has already drawn the attention of a number of scholars here in China. Our analysis shows that in our submodels each different type of secondary education has had a markedly different effect on opportunities for each different type of higher education.

When compared to the group that never attended senior high school, those who attended professional/vocational senior high [*zhiye gaozhong*] are not that different from those who attended ordinary or key-institution high schools with respect to opportunities for higher education. What deserves special attention is that the time-period interaction effects for submodels M2 and M3 indicate that, when compared to those who attended professional/vocational senior high or did not attend senior high at all, those who attended key-institution and ordinary senior high schools found their advantage declining 70 percent and 50 percent, respectively. This means that once the expansion began, those who had never attended senior high or attended professional/vocational high school experienced a significant increase in opportunities to enter vocational higher education and obtain adult higher education.

When it comes to opportunities for baccalaureate education the situation is very different. With M5, the submodel for the college-age population with no work background, the advantage of those who attended key-institution or ordinary senior high schools over those who attended professional/vocation high schools was clear: 44 times (chi-square = 70.3) and 15 times (chi-square = 34.8), respectively. Similarly, the results of M5 show that those who attended key-institution senior high schools had an advantage of 2.9 times (chi-square = 49.8) over those who attended ordinary senior high schools. Then, after controlling for such factors as individual employment, we found that professional/vocational senior high education could even have a significant negative effect on chances for entry into a baccalaureate program, only equivalent to 36 percent of that corresponding to those who had not attended senior high.

The difference between M4 and M5 needs to be explained. In the risk data set for the college-age group for M5, there was virtually no case of anyone receiving a chance for baccalaureate education after becoming employed, which means that for this model there was no individual-employment effect. In M4 we controlled for such effects as individual employment. Consequently, the fact that the key-institution and ordinary senior high schools exhibited considerably less advantage in M4 than M5 makes it clear that with a longer period of individual life experience, the type of se-



nior high school education one is able to obtain will show up in the attainment of job status, an even more important accomplishment in a person's life. Additional proof and analysis on this aspect would require setting up an appropriate model to explain the cause-and-effect relationships involved, an effort that is outside the scope of this discussion.

A similar issue exists with M3. A model analogous to M5 that focused on opportunities for professional/vocational higher education for a "college-age population" (not shown in this article) was run, with the independent variables having basically the same effects as those of M3, the only departure being the effects of the variable denoting different types of secondary education: Compared to those who had not attended senior high school, the level of advantage enjoyed by those who attended key-institution, ordinary, and professional/vocational senior high schools was 18.45 times, 13.9 times, and 3.5 times, respectively. At the same time, the difference among the key-institution, ordinary, and professional/vocational senior high schools was statistically significant at a level of  $p < .001$ . Obviously, even though the effect of type of senior high education was quite pronounced here, it was still somewhat weaker than the effect that type of senior high education had on opportunities for baccalaureate education. As far as M2 is concerned, because there is no "college-age population" for adult education, no model analogous to M5 was run.

Nevertheless, to examine a person's career as a whole, we had to set up an analysis of the relation between individual professional achievement and opportunities for higher education. Among the earliest to address this issue were William Sewell, W.P. Shah, and others, in their 1967 study of Wisconsin youth in which they used a path-analysis model to show that individual socioeconomic status (divided into four levels, labeled upper, upper middle, lower middle, and lower) and intellectual level simultaneously affected the individual's opportunities to plan for college, enroll in college, and graduate from college and so ultimately influence a person's educational attainment. Since Sewell et al. did their study, however, researchers involved in educational sociology and social stratification have rarely broached this issue again.

In this study, after we separated out those who were still enrolled as students during the year before the risk period, we noticed that those who obtained white-collar positions once they were employed enjoyed a pronounced advantage over physical laborers in obtaining opportunities for various kinds of higher education. The level of advantage varied to a certain extent according to the type of higher education involved, however. First, in the models for baccalaureate and professional/vocational higher education (M3 and M4), there was no significant difference among various levels within the white-collar classification, whereas for adult higher education during the 1978–97 period, there was a significant difference between ordinary managers and technicians on the one hand and middle and top managers and office personnel on the other, with the difference 1.5 times and 1.8 times for the latter two categories (calculations based on the main effects of M2). After 1998, however, the advantage of middle and top managers and technicians increased markedly. Next, the order in which levels of advantage over physical laborers occurred for middle and top managers, ordinary managers, and office personnel varied somewhat among the three submodels according to the type of higher education involved. In the baccalaureate submodel, middle and top managers and technicians enjoyed the highest advantage, whereas in the vocational/professional submodel and adult higher education submodel, ordinary managers and technical personnel ranked higher in terms of advantage. This shows that the subject's job status imposes a certain preference on his or her selection of type of higher education. If graduate study were incorporated into the analysis, the differences would be even more pronounced.

### **Expansion of Higher Education and Reversal in the Effects of Class Background**

From the description of the general situation we can see that overall expansion in higher education has caused a significant decline in the differential advantage brought about by fathers' class background. Further observations based on analytical results of the

submodels, however, reveal that, in relation to each different type of higher education, the effects of the fathers' class background exhibit a very significant reversal.

In the area of adult higher education, where the survival orientation predominates, the advantage enjoyed by the younger generation in all other job–education strata has undergone a very pronounced decline relative to those with basic education who do physical labor, and, moreover, the higher the father's job status or educational level, the greater the decline of the younger generation's advantage. When the effects of all other variables are controlled, M2 shows that children with fathers who had completed higher education and held high-level white-collar positions or midlevel white-collar positions, or had secondary education and held high-level white-collar jobs, had levels of advantage over physical laborers with basic education that after 1998 declined to 71 percent ( $= [1-0.29] * 100$  percent [the same method of calculation used throughout this section]), 74 percent, and 80 percent, respectively (compared to the period 1978–97). The children of midlevel white-collar workers who only had secondary education and lower level white-collar workers with basic education or secondary education and above experienced declines of 56 percent, 53 percent, and 51 percent, respectively, in their relative advantage vis-à-vis getting adult higher education after 1998. The children of physical laborers with secondary education and above experienced a somewhat smaller decline, approximately 48 percent.

There are two possible approaches to explaining this decline in advantage: First, based on the preceding account and revision relating to the maximally maintained inequality [MMI] hypothesis, during the period of expansion of access to higher education the privileged classes may have tended to compete even more so for opportunities in formal higher education that offered high quality along with greater effectiveness in and clearer orientation toward gaining status, and, consequently, adult higher education in which the survival orientation predominates gradually ceded some ground, causing the probability that those in the lower social strata could obtain this sort of education to increase. Second, with the bound-

ary between survival and status orientations changing as education expanded, adult higher education, which may still have retained some significance in terms of status during the early part of the reform, evolved into a kind of education that was focused purely on job-skill acquisition, and its significance as a means of gaining high social status began to decline (Liu Jingming 2005). At the same time, for reasons such as the immaturity of the labor market, this type of job-skill education did not become as effective as it should have, and, consequently, if during the period before expansion the privileged younger generation saw adult higher education as helpful in competing for status, once the period of expansion began, they may well have gravitated toward other options.

After expansion changes in how the fathers' generation's social status affected obtaining opportunities for baccalaureate education, which is predominantly status oriented, resulted in the opposite sort of situation, the relative advantage of the privileged strata not only did not shrink but actually more than doubled.

Following the reasoning used above in explanations for the models, we set up two different models to analyze distribution of opportunities for baccalaureate education among all samples from the entire data set and also among the entries that were limited to a certain age range. M5 provides an analysis of the opportunities for formal baccalaureate education obtained by young people seventeen to twenty-five years old between 1978 and 2003, separating out the residual effects of the Cultural Revolution still present during the reform period, and, consequently, the model gives a comparatively pure reflection of the original level and changes in the level of advantage enjoyed by members of the younger generation from different class backgrounds vis-à-vis obtaining opportunities for baccalaureate education. Like the other models, M5 was subjected to testing and selection using stepwise regression for time-period interaction effects. After interaction effects between time period and the variables for gender and fathers' status were included, the main effects of the time period no longer had any real significance, which means that the increase in opportunities after expansion is explained by changes in the inter-

action effects between gender difference and class background.

M5 shows that after the expansion, when compared to children of those with basic education or less working in any area of employment, the younger generation from all other job–employment strata enjoyed a large increase in advantage, in most cases statistically significant at the .05 level (with the exception of high-level white-collar workers with mid-level education). Children of high-level white-collar workers who had received higher education had a 4.25-fold increase in advantage ( $= 5.25-1$ ), children of midlevel white-collar workers with higher education or mid-level education had respective increases of 1.4-fold and 1.6-fold, and children of physical laborers who had received mid-level education or above enjoyed a 1.8-fold increase over children of those in the same line of work who had only basic education or less. Children of lower-level white-collar workers with mid-level education or above did not have a relative advantage that was statistically significant during the 1978–97 period (see main effects for this stratum in M5), but once expansion began they exhibited an effect that increased five-fold. In this way, once we controlled for other effects in M5, we were able to make direct calculation of the ratio of advantage enjoyed during the period of expansion by children of those with mid-level education and above in all lines of work over children of those with only basic education in all lines of work. Taking the job-status variables in order of level, the advantages vis-à-vis receiving opportunities for baccalaureate education were: high-level white-collar/higher education, 21-fold ( $\approx 3.975 \times 5.246$  [subsequent calculations completed the same way]); high-level white-collar/mid-level education, 2.2-fold; mid-level white-collar/higher education, 10-fold; mid-level white-collar/mid-level education, 6.6-fold; lower-level white-collar/mid-level education or above, 6-fold; and physical labors/mid-level education or above, 5.8-fold (quantities with no statistical significance were calculated as 1-fold). Even though whether a subject was a “college-age person” was not specified in the data set for M4, changes present in the effects of class background during the expansion reflect a situation roughly the same as that shown by M5.

***Gains for the Middle and Lower Strata and Elite  
Mobility from the Laboring Class***

The expansion in higher education greatly enlarged the disparity in opportunity for baccalaureate education among groups of children from each job-professional stratum, and at the same time it diminished the continuity between cohorts in adult higher education. Without doubt, the trend toward shrinkage in the advantage enjoyed by the privileged classes in the area of adult higher education is clear proof of the benefit gained in higher education by the middle and lower strata. What needs to be better understood is whether during the expansion the middle and lower strata were able in some way or other to reap some benefit in the sphere of non-survival-oriented higher education (e.g., professional/vocation or baccalaureate). In this section we focus more closely on the opportunities for higher education of the children of physical laborers.

Studies in social stratification seem to share the basic view that the physical laboring stratum is at a clear disadvantage with respect to resources, opportunities, and the attainment of social status. The study by Goldthorpe et al. (1969) of affluent workers, however, takes a different analytical view, holding that in welfare capitalist societies the development of the services industry and advances in production technology make the positions of a portion of the technical workers and service personnel more and more important, and this causes rapid elevation of their socioeconomic status within a short period of time. Chinese academics do not frequently study stratification within the laboring class from the standpoint of continuity between generations or cohorts, and, in fact, a number of studies seem to ignore the significance the de facto formation of layers within a stratum (especially as relates to differences in education) has for social mobility. I believe that perhaps the customary logic of transmission from one generation to the next cannot be extended to the efforts of physical laborers to change their destinies, though concepts such as elitism or recreation of social classes might come up with a logical thread to explain social mobility that entails a “sudden

rise in status” [*diwei jueqi*]. This shows that the lower social stratum has its own plans for class action in opposition to the attempts by the upper classes, who constantly strive to maintain the superiority of their resources, to close themselves off from the rest of society.

In this study the fathers’ generation was divided into strata using a combination of employment and education, with physical laborers being divided into two groups according to whether they had secondary education or above or basic education. The results of running models M1 through M5 show that the children of laborers with secondary education and above enjoy a pronounced advantage over the children of laborers with only basic education in receiving opportunities for higher education, regardless of the category of higher education involved. After the results of the model were calculated, testing showed that the level of advantage in receiving opportunities for baccalaureate education enjoyed by this stratum shows a statistically significant difference only from the main effects of the two strata that include higher education as one element (in M5, E1 vs. E7:  $\chi^2 = 4.16$ ,  $p = .04$ ; E3 vs. E7:  $\chi^2 = 4.84$ ,  $p = .028$ ). Even though their opportunities for getting traditional higher education or junior college during the 1978–97 period (main effects) were significantly lower than the stratum defined by high-level white-collar work and higher education, during the expansion period their opportunities increased and their advantage clearly surpassed that of the high-level/higher education stratum ( $\chi^2 = 2.77$ ,  $p = .096$ ).

With respect to adult higher education, their opportunities were significantly lower than those enjoyed by the high-level white-collar/secondary education stratum during the 1978–97 period ( $\chi^2 = 4.131$ ,  $p = .042$ ), though during the expansion period their advantage shrank significantly less than that of this comparison group ( $\chi^2 = 3.66$ ,  $p = .056$ ). These tests show that in obtaining opportunities for higher education the children of laborers with secondary education or above are in a position of comparative advantage, particularly with respect to opportunities for formal and adult higher education.<sup>3</sup>

## Summary

The results of this analysis show that, while the mechanism for gaining opportunities to access higher education is complex, the basic thread that runs through it can be clearly seen: Though differences in nature among the various types of higher education have determined that opportunities for them are governed by different models, the scarcity of such social opportunities and the differing effects of social-class background and social status were clearly present throughout the 1978–2003 period, while, at the same time, the different types of senior high level education corresponded clearly to the differences among types of higher education.

The impact of the expansion of higher education on fairness in education is extremely complex. If we view opportunities for all the different kinds of higher education as a unified whole, we discover that after 1998 inequality in the area of higher education exhibits a tendency to decrease. In-depth analysis shows, however, that this process of becoming fairer is subject to conditions that entail social class differences remaining clearly defined within higher education. The differences inherent in higher education determine the competitive posture and strategy each social class will adopt toward each type of education: In the case of baccalaureate education, which has a clear status orientation, expansion in higher education has led to the privileged classes somewhat disproportionately increasing their relative advantage with respect to it, while expansion of opportunities for adult higher education, which has a survival orientation, has caused groups from the lower social strata to derive greater benefit.

At present higher education in China is also providing a system-based guarantee of upward mobility for qualified portions of the lower social strata, which, as a class-based behavioral strategy, enables physical laborers who have received a good education to utilize advantages such as their cultural capital and, in the process of maximizing their opportunities, to accomplish moves upward beyond the lower stratum in one generation. This does not conflict with the possibility that members of the privileged strata may gain even better access to opportunities; quite to the contrary,



it is yet another manifestation of class-based behavior designed to maximize advantages.

## Notes

1. For details of our sampling approach, see [www.chinagss.org](http://www.chinagss.org).
2. A chart comparing reference risk data is not included here. Other analytical data relevant to this study is available via e-mail: [liujingming@ruc.edu.cn](mailto:liujingming@ruc.edu.cn).
3. For data from the models mentioned above, see Liu Jingming's original article in the first compendium of articles in international educational sociology from the Beijing University Sociology Department, March 18–19, Beijing, 2006.

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